

Amendments to the Specification:

Please replace paragraph [0006] with the following amended paragraph(s):

[0001] The keto group provides a unique chemical reactivity not present in the common twenty amino acids due to its ability to participate in addition reactions involving either the carbonyl group or the acidic C α position. This group also provides an alternative to the natural amino acid cysteine for the selective modification of proteins with a large variety of chemical reagents. The reactive thiol group of cysteine has been extensively used to attach various biophysical probes to proteins. *See, e.g.,* Creighton, T. E. (1986) Methods Enzymol. 131:83-106; Altenbach, C., et al., (1990) Science 248:1088-92; Brinkley, M. (1992) Bioconjug. Chem. 3:2-13; Giuliano, K. A., et al., (1995) Annu. Rev. Biophys. Biomol. Struct. 24:405-34; Mannuzzu, L. M., et al., (1996) Science 271:213-6; Griffin, B. et al., (1998) Science 281:269-272; [~~Llopis, J.,~~] Wu et al., (2000) Methods Enzymol. 327:546-64; and, Gaietta, G., et al., (2002) Science 296:503-7. Unfortunately, the labeling of single cysteine residues is often complicated by the presence of more than one accessible cysteine residue in a protein, as well as exchange reactions of the resulting disulfide in the presence of free thiol. Therefore, the availability of a nonproteinogenic amino acid with orthogonal reactivity makes possible selective modification of protein in cases where a single cysteine cannot be selectively labeled, where two different labels are needed, and where a disulfide linkage may not be sufficiently stable. The carbonyl group reacts readily with hydrazides, hydroxylamines, and semicarbazides under mild conditions in aqueous solution, and forms hydrazone, oxime, and semicarbazone linkages, respectively, which are stable under physiological conditions. *See, e.g.,* Jencks, W. P. (1959) J. Am. Chem. Soc. 81, 475-481; Shao, J. & Tam, J. P. (1995) J. Am. Chem. Soc. 117:3893-3899.